



CONSTRUCTION EQUIPMENT

VOLVO A40G 352237 - DIESEL ENGINE



Sample No: VCP447748
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP447748	VCP422306	VCP421359	VCP422014
Sample Date	05 Jun 2024	30 Nov 2023	23 Aug 2023	07 Jun 2023
Machine Hours	2856	0	1409	906
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	ABNORMAL	NORMAL	ATTENTION	ATTENTION

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OIL CONDITION

Visc @ 100°C	cSt	12.3	12.5	12.2	12.4
Base Number (BN)	mg KOH/g	7.1	9.7	9.1	10.0
Oxidation (PA)	%	84	80	74	79



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.2	0.2	0.2
Nitration (PA)	%	86	63	64	58
Sulfation (PA)	%	61	60	57	62
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	5	5	7
Sodium	ppm	<1	2	13	<1
Potassium	ppm	1	0	2	2



WEAR METALS

Iron	ppm	13	5	7	9
Copper	ppm	▲ 26	2	2	6
Lead	ppm	<1	<1	0	<1
Tin	ppm	1	<1	1	1
Aluminum	ppm	2	1	2	<1
Chromium	ppm	<1	0	<1	0
Molybdenum	ppm	49	46	68	43
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	1685	1623	1698	1614
Magnesium	ppm	472	502	545	474
Zinc	ppm	1107	1080	1158	1065
Phosphorus	ppm	898	869	948	893
Barium	ppm	0	0	0	0
Boron	ppm	18	38	49	46

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: VOLVO0090
Unique No: 11073571
Signed: Sean Felton
Report Date: 13 Jun 2024



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GRAPHS

